



OIEP

#3

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/954,773A

DATE: 02/10/2002
TIME: 13:24:59

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3 <110> APPLICANT: Southern Illinois University
4     Lightfoot, David A
5     Gibson, Paul T
6     Meksem, Khalid
8 <120> TITLE OF INVENTION: SOYBEAN SUDDEN DEATH SYNDROME RESISTANT SOYBEANS, SOYBEAN
CYST NEMATODE
9     RESISTANT SOYBEANS AND METHODS OF BREEDING AND IDENTIFYING RESISTANT PLANTS
11 <130> FILE REFERENCE: 1268/2/2
C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/954,773A
C--> 13 <141> CURRENT FILING DATE: 2002-01-22
13 <150> PRIOR APPLICATION NUMBER: 09/007,119
14 <151> PRIOR FILING DATE: 1998-01-14
16 <160> NUMBER OF SEQ ID NOS: 20
18 <170> SOFTWARE: PatentIn version 3.1
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22 <212> TYPE: DNA
23 <213> ORGANISM: Glycine max
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26 <221> NAME/KEY: misc_feature
27 <222> LOCATION: (1)..(527)
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36 ttttattaaa taataaaaga gtaattacat aaaaatatgt tcgattacat taaaccccaa      180
38 caaaggatga atttagcttc tcatgaccat ggggaaaatc aaacttgatg aacaagaaga      240
40 tgaagaagaa tccttaagga taaacactgc ctagctccaa tgtgctctct agtattttat      300
42 ctttcaaaaa tccccaaaga cccctaattt tcagtaagaa gccattttc aatcagaagc      360
44 ccattttcaa tcaagaagcc cattttcaat cagaagccca ttttcaatca gaagccatt      420
46 ttcaatcaga agcccatttt caatcagaag cccattttat aattgtattc ccaaaacttg      480
48 agattcttga acgtaaatta ttagtaaatt gtaatcacct ctgtaaa                    527
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52 <211> LENGTH: 815
53 <212> TYPE: DNA
54 <213> ORGANISM: Glycine max
56 <220> FEATURE:
57 <221> NAME/KEY: misc_feature
58 <222> LOCATION: (1)..(815)
59 <223> OTHER INFORMATION: n is a, c, g, or t/u
62 <400> SEQUENCE: 2
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65 gttgggagct ctcccatatg gtcgacctgc aggcggccgc actagtattt cagaagccca      120
67 aaggtaacag caataagtaa tcccttggtt ataagatccc agaacttcca gtttatttaa      180

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69 tgaaaatgca ataacatcgg ctagtttcac aagtaatata caaatcgga catcacattg 240
71 actacaatat atagtacata aattaacact aagaaacctc cttgatttga tattatgcat 300
73 ttacctatgt tgttccacaa gaatatactc aaatgacttt gccttgattt aaattatcac 360
W--> 75 gatgtaacac aaacaaagat gatantttgt cgatcaactg ttcagcacca agagagccct 420
W--> 77 ccccaacaatc aactcaggtt ttcacttttg gtgcttgaaa atgagtggca catgnaaaag 480
W--> 79 caagagtent ctttgacaaa tgtgcctgcc ganagttatc antacttact aacaagataa 540
W--> 81 tgagccaaaa catcatctgg gncatcaacc ttcatgnctt tntcaagttt atacctatna 600
W--> 83 ntnactangt cttatattnn canntgggtga ttacanttac nantaagttt agcttnaaga 660
W--> 85 aatncaagtt ttngggactc catgcctngn cnggntttcn natccgtcgg ccagggcggn 720
W--> 87 cnggncact gntnggnagn cccanttnn cagancacng nccntttcc attcnggnc 780
W--> 89 cntcncttc aangacngcc ggngaaancn ngggt 815
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94 <212> TYPE: DNA
95 <213> ORGANISM: Glycine max
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98 <221> NAME/KEY: misc_feature
99 <222> LOCATION: (1)..(435)
100 <223> OTHER INFORMATION: n is a, c, g, or t/u
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106 ccatagcaag caaagtatgg atttgtcatt ttccagagac gaagaactct caacaaacat 120
108 gtttatagta acttcattgc aaaactcaac aaatagattt ttggaacctt aatataataa 180
110 aattcaacag tcttctttta ttttattctg ctcttacctt ctcataggat catatagaat 240
112 ttaacctac aagctctcaa aaaacaatcc attattatgc tccttatcca ataaaacaaa 300
W--> 114 accatagagt gattctcaaa atgaagattg acaaaggcaa aaagtatatgc tggntcaata 360
W--> 116 gcttctttat aattntcttc atcttgacc ntcccngcct taggnggtct ccattgtcaa 420
W--> 118 tccaaaggtn ntcgn 435
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122 <211> LENGTH: 183
123 <212> TYPE: DNA
124 <213> ORGANISM: Glycine max
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129 <223> OTHER INFORMATION: n is a, c, g, or t/u
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135 tcgctcatat gcccttacag ggtttgccga attagtgtga aggtaattcg gtaaatggat 120
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139 agt 183
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150 <223> OTHER INFORMATION: n is a, c, g, or t/u

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158 tgttttatga aggtaataca ccaattatta tggttttttg tttataaaaa tgtgaataat      180
160 tgtcaatcgt gattgcatta tctctccttt actctgtctc ttcacctttt ttaccctttt      240
162 atttgagagg aagaatccat gtagtaaaaa atgatgataa aattgttaga aaatatagtg      300
164 tcatgtaatt agagattcag attataactt agaagacact attattttca tgtaatacta      360
166 tccacgggta attatcaata ctgacatatt ttcactcaaa atattctggg tttctcatta      420
W--> 168 tatacattta aataggagct attanccatt gcaagcttgg gtttggaggc cttccgatgc      480
W--> 170 cttgttgagg ttgngacca                                499
173 <210> SEQ ID NO: 6
174 <211> LENGTH: 500
175 <212> TYPE: DNA
176 <213> ORGANISM: Glycine max
178 <220> FEATURE:
179 <221> NAME/KEY: misc_feature
180 <222> LOCATION: (1)..(500)
181 <223> OTHER INFORMATION: n is a, c, g, or t/u
184 <400> SEQUENCE: 6
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W--> 187 taaattgaaa atatatacgt aagancttca tctaacagtg ctagtgcgaag aatgcgtaaa      120
W--> 189 tgcagggnat ccatttccat actaaaatgg acaaaaactta tttttttttt ttagcggcaa      180
W--> 191 acgttaatta ttaatttttt ttagtacaag ggatcaaacc angacctttc cttcttttcc      240
193 atctttcttg accacccaac caaccttata tctccacaaa acctattata tgttgttctt      300
W--> 195 cggggactat cagaattgga gtttaacctc gggcantcaa tctacataat ctttgatttn      360
W--> 197 atttngtgaa gttctaaagc cacaggcatt atttatntta ttntttctgn agtaaccnc      420
W--> 199 catatgttgg tnnataaggg tangnatnaa aatncnttgg ntggtnnena tttgcncttn      480
W--> 201 cnaggccggg gatggntttt                                500
204 <210> SEQ ID NO: 7
205 <211> LENGTH: 189
206 <212> TYPE: DNA
207 <213> ORGANISM: Glycine max
209 <220> FEATURE:
210 <221> NAME/KEY: misc_feature
211 <222> LOCATION: (1)..(189)
212 <223> OTHER INFORMATION: n isa, c, g, or t/u
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W--> 216 nnacaanana ncaggggatc ctctagagtc gacctgcagt gatactagaa ctnaatgaac      60
W--> 218 agggagagag agagagagag aganantnaa nataacgatg aagctctccc tattgacggg      120
W--> 220 gttcattgta gcaatagcat cgttatctct tattattgct ggttcatcat natctcaatt      180
222 ccagtggca                                189
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228 <213> ORGANISM: Glycine max
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231 <221> NAME/KEY: misc_feature
232 <222> LOCATION: (1)..(724)
233 <223> OTHER INFORMATION: n is a, c, g, or t

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241 taactttatta acgtttcaca ttttcaaaga cgagtctagc tatttataat tttttttcct      180
243 aaaatatatt ttttgtcctc ataaatatga aaatatTTaa aattcgttcc taattttttt      240
245 ttcaaagcat ctttccttct cacaaaattg aaatgtatca tttttttttg ttcaaaagtt      300
247 taaataaatt tgaacctaat atgacatttt atatcggtta tacatataac tgatataaac      360
249 atcaagtttt ttatatcaat gatacctata actgatatca aatgtgacaa ttatatatat      420
251 aattaatgta aaaaagtcac aaatataatt tattttgagt caaaaaataa tatattttta      480
W--> 253 ttattttgaa gatgaaaaag gataaattta aaacatttgt gtgangatga aaaactagat      540
255 gttttttttc ctggttttaa tgcaaaacca atgctatttt atttaaattt tacctttttt      600
W--> 257 ttataattac nccacaaaa aaccgtttgg tgttacaaat ttganttaaa ttctnttgtt      660
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261 atct                                                                                          724
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266 <212> TYPE: DNA
267 <213> ORGANISM: Glycine max
269 <220> FEATURE:
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271 <222> LOCATION: (1)..(801)
272 <223> OTHER INFORMATION: n is a, c, g, or t
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280 gcacacaccc tatctttcat aaaattacta cactttttta tttttgtaat aaaaaaccta      180
282 gaaaaactca ttatgaaaca gatgatgtac ttttaacact ctgtcggcct ctctctctct      240
284 attatatatt gatttaaatt tattgagaat tatatttttg ttgggtctca tttattatat      300
286 tttattaatt ggatccgggc cctctagatg cggccgcatg cataagcttg agtattctat      360
288 agtgtcacct aaatagcttg gcgtaatcat ggctcatagct gtttcctgtg tgaaattggt      420
W--> 290 atccgctcac aattccacac aacatacgag ccggaagcat aaagtgtnaa gcctggggtt      480
W--> 292 cctaattgagt gagctaactc acattaattg cettgcgctc actgcccgtt ttccagtcng      540
W--> 294 gaaacctgtc ctgccagctg cattaatgaa tcngccaacc cncggggana agcngtttgc      600
W--> 296 ntatgggcgc tcttnccgct tcctcgtcct ntgaactcgt gcgctcngtc nttcngntgc      660
W--> 298 cgcgaacggt atcanencac tcnaangnng taaatacggg tatccaccna accnngggga      720
W--> 300 naaccnngga aaaaacatgt nanccaaaag gccnccaaaa ggccangaaa cnttnaaaag      780
W--> 302 gccnnttgc ttgnctttnt n                                                                 801
305 <210> SEQ ID NO: 10
306 <211> LENGTH: 809
307 <212> TYPE: DNA
308 <213> ORGANISM: Glycine max
310 <220> FEATURE:
311 <221> NAME/KEY: misc_feature
312 <222> LOCATION: (1)..(809)
313 <223> OTHER INFORMATION: n is a, c, g, or t
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319 ccgagctcga attcgctcgac ctcgagggat ctttttatgt tggtagctac tgtaatatca      120
321 tcttgtaactt ttaactttta agtcatactc cttttggact catatataag caaaagagtg      180

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323 gtcttgtatg tcggacttaa atataagcaa atctaactaa ttttgtccta ttttaatactt 240
325 tcattcctaa aacacccttc atttaattct aattctatatt ocaataactc ttttttatctc 300
327 atgataacaa gttccaatga aggacatttt agaaataacc ttatttttta tttgagatta 360
329 gtaaaattaa atgatgtgaa ctaactttct taattaatgt gaaattagtt attttttctt 420
331 atatacgagt ccaaagggag taccaaattt cacaaatgta ctaaaatgta ttatatgctt 480
W--> 333 ctttttaatt catctttgct gcatanctac ttagctactg tgccttgatc cgggcccctct 540
335 agatgcggcc gcatgcataa gcttgagtat ctatagtgtc cctaaatagc ttggcgtatc 600
W--> 337 atggtcatag ctgtttccng tgtgaaattg ttatccgctc acaattccac acaacatacg 660
W--> 339 anccggaagc ataaaagtgt taagccnggg gtgcctaata agtgagctaa ctcacattaa 720
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349 <213> ORGANISM: Glycine max
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352 <221> NAME/KEY: misc_feature
353 <222> LOCATION: (1)..(810)
354 <223> OTHER INFORMATION: n is a, c, g, or t/u
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362 agaggggctg attttggaga aaacatcatc catggtataa agtcctgcta gattccagct 180
364 attgttcaca ttcatccctt acatatgaga atatccctat aagctgaaac taacttttac 240
366 aaacaaacat gcaccgaacc attaaagttt gacttaatat cgggggtata atgaccttaa 300
368 ttcagaaatt cacataaata actaaaagta agttgtatatt tttttatgtc tggatttact 360
370 gcacaaacta aacaaaagtt tgtggattta gacataaaaa ataccaatgc tgtgtgaaaa 420
W--> 372 taagaaatgg tggatcatata gacaagtttc ttttctgttt tcttttaatt gcagtcnaag 480
W--> 374 ccatcangag gttcatgtaa ttaaccaaac tagacgttga cttttgggtt tatccttttg 540
376 tagaatagca agcaagtcac tataaatctg gccattggga cagcttagtt taactccgcg 600
W--> 378 cgcaaatatt ttaaaatatt naataataat atcacctaaa atcatatttg tcanttcatt 660
W--> 380 ttgttttang ttatatcaat tattattttt taccttacnt cctttataat ntcaatgatg 720
W--> 382 ggacccaaaa aattatcaaa tacnttnaag cnttatttat tattaattaa ncctttaatt 780
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388 <211> LENGTH: 777
389 <212> TYPE: DNA
390 <213> ORGANISM: Glycine max
392 <220> FEATURE:
393 <221> NAME/KEY: misc_feature
394 <222> LOCATION: (1)..(777)
395 <223> OTHER INFORMATION: n is a, c, g, or t/u
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401 catctagagg gcccgatct ttcggttgaa gcaaaattga agtcttttgc tcatttttat 120
403 caaattcttt aatgaaaagt taattacata aaatatatta gtagaagcaa ttttacacag 180
405 ttattattta aaaaaattac acagttattc aataacaaat tacaatatat tataaggtta 240
407 taataaatat tttaaaattc atataaaaga tgacttatta ataagttgat aatgtaaatt 300
409 ttttacacta ttaactcat tttagcgaat cttagcgaca acatactatt tttttcatga 360

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L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
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L:77 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
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L:382 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11